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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,781	10/17/2003	R. Terry Wornath	48198-00002	7720

23598 7590 12/12/2006

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EXAMINER

FLANIGAN, ALLEN J

ART UNIT	PAPER NUMBER
3744	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,781	WORNATH, R. TERRY	
	Examiner	Art Unit	
	Allen J. Flanigan	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 and 52-69 is/are pending in the application.
- 4a) Of the above claim(s) 15-23, 39-50, 52 and 54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 24-38, 53 and 55-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 15-23, 39-50, 52, and 54 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/13/2005.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 8-10, 13, 14, 24-29, 31-33, 36-38, 53, and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Fayolle.

Fayolle shows stacked parallel plates within an enclosure for exchanging heat between two fluid streams. As shown, they may be corrugated (claim 8). They are made from metals such as "steel, stainless steel, titanium . . .". Recitations in amended claim 1 regarding the exchanger being "connectable" to a combustion system are not considered positive structural limitations, but statements of intended use.

Regarding claims 53 and 55, the recitations in these claims essentially fail to further limit the claims in any way. BTU is a measure of heat; compare with joule or calorie. Specifying that an exchanger is "adapted to exchange" an amount of heat is basically meaningless. Heat exchangers are typically rated based on heat exchange rates, i.e. how much heat per unit time (Watts, BTU/hr, etc.) can be exchanged between fluids. Even the smallest capacity exchanger is capable of exchanging any amount of heat over a long enough period of time.

Claims 1-14, 24-38, 53, and 55-61 are rejected under 35 U.S.C. 102(b) as being anticipated by Murray.

See Figs. 5 and 6, lines 12-21 of page 2 of Murray. Note that in this embodiment Murray, like Fayolle, employs corrugated plates 56 readable on the claimed "at least three plates" of claim 1.

Applicant's arguments filed 10/5/2006 have been fully considered but they are not persuasive.

Applicant's request for rejoinder of inventions I and II is not persuasive. A showing of separate classification is sufficient reason (prima facie showing of burden) for insisting upon restriction. At such time as claims to the subcombination (the heat exchanger) are found to be allowable, rejoinder of the nonelected claims will be considered. MPEP 821.04, 821.04(a).

The restriction requirement was made final in the previous action.

Contrary to applicant's remarks, claim 1 as amended is not "connected to" a combustion system. The recitation "connected to atmosphere for a first stream" is essentially reciting connection to a source or sink for fluids exchanging heat, and is implicit in any heat exchanger structure.

The arguments regarding claim 24 are not persuasive; the claim is not positively reciting a method of combustion or even heat exchange, but an assembly method comprising the steps of "providing", "disposing", and "adapting" plates. None of these is deemed to go beyond the method of assembling a structure to the process of using it to exchange heat or burn a

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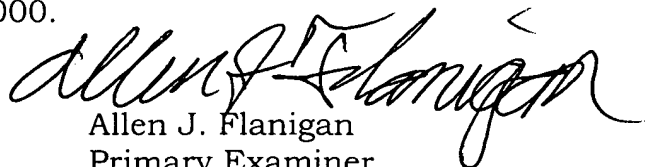
combustible mixture (there is no recitation of a “flowing” step, for example, but merely of “disposing” a plate to “accommodate” such a flow in use; hence the recitations (such as in claims 34-36) concerning what fluid the streams comprise carry no weight). Even if such recitations were given weight, Murray clearly discloses the use of heat exchangers to exchange heat between combustion gases and fluids to be heated. Similarly, the recitation in claim 56 of “at least two streams of fluid, wherein one stream . . . is mixable with fuel” is met by Murray, who explicitly discloses “means whereby a heated fluid flowing through one conduit may give up its heat to a body of air or other fluid flowing through a juxtaposed conduit”. Air clearly reads on the claimed “stream mixable with fuel”.

Applicant’s arguments in regard to the rejections based on Murray are not persuasive or are not commensurate in scope with the claims. Murray clearly discloses a heat exchanger with independent flow paths; whether they ultimately plan on using the air for combustion or other purposes is of no moment, because the product being claimed is defined by the recited structure, not the intended use. See MPEP 2114. Nothing in the claims recites or requires “fluid flows that are fluidly isolated from the inlet to the outlet of the systems defined in the claims”, since the only “system” positively recited in the claims is the heat exchanger per se, and the fluids are clearly isolated between inlets and outlets in the exchangers of both Fayolle and Murray.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Allen J. Flanigan
Primary Examiner
Art Unit 3744